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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application for:

Kenyon et al.

Application No.: 09/399,065

Filed: September 19, 1999

For: A Player-Centric Method And Apparatus For Creating, Distributing And Consuming Content

Examiner: Saleh Najjar

Art Group: 2157

Confirmation No.: 1823

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Appellant's Brief Under 37 C.F.R. §1.192 In Support Of
Appellant's Appeal To The Board Of Patent Appeals And Interferences

Dear Sir:

The Appellant hereby submits this Brief in support of their appeal from a final decision by the Examiner, mailed April 7, 2003, in the above referenced case. This final decision was in response to arguments filed in accompaniment of a Request for Continued Examination filed March 25, 2003. Appellant respectfully request consideration of this appeal by the Board of Patent Appeals and Interferences for allowance of the present patent application.

(1) Real Party In Interest

The real party in interest is WildTangent, Inc, a corporation of Delaware, having its primary place of business at 18578 NE 67th Court, Redmond, WA 98052.

(2) Related Appeals And Interferences

To the best of Appellant's knowledge, there are no appeals or interferences related to the present appeal which will directly affect, be directly affected by, or have a bearing on the Board's decision.

(3) Status Of The Claims

Claims 1-38 were rejected in the Final Office Action dated April 07, 2003. Claims 1-38 remain pending herein and are reproduced, as pending, in Appendix A.

(4) Status of Amendments

No claim amendments have been made since the mailing date of the final rejection.

(5) Summary of the invention

A novel method for streaming multi-media content is disclosed. Multiple versions of model data tailored for different operating environments and differentiated in accordance with value(s) of at least one operating characteristic of remote requesting

client computer systems are stored in a multi-media content providing server. A multi-media content player of a client computer system determines operating characteristic value(s) for the at least one operating characteristic of the client computer system. The multi-media content player adaptively requests appropriate versions of selected ones of the model data, e.g. geometric data, based at least in part on the determined operating characteristic value(s) of the at least one operating characteristic of the client computer system. In response, the providing server streams the requested versions of the requested model data to the multi-media content player for rendering.

(6) Issues Presented

I. Whether claims 1-10, 12,-21 and 23-38 are patentable under 35 U.S.C. §102 over *Li*.

II. Whether claims 8, 9, 19, 20, 32 and 33 are patentable under 35 U.S.C. §102 over *Li*.

III. Whether claims 11 and 22 are patentable under 35 U.S.C. §103 over *Li* in view of *Official Notice*.

(7) Grouping of claims

For purposes of this appeal, based on the above listed grounds of rejection, the claims stand or fall together as follows:

Issue I Claims 1-7, 10, 12-18, 21, 23-31 and 34-38 stand or fall together as Claim Group I.

Issue II Claims 8, 9, 19, 20, 32 and 33 stand or fall together as Claim Group II.

Issue III Claims 11 and 22 stand or fall together as Claim Group III.

(8) Arguments

Issue I - Claim Group I

Rejection of claims 1-10, 12-21 and 23-38 under 35 U.S.C. §102 was improper because such claims are patentable over Li et al., U.S. Patent 6,345,279 (hereinafter *Li*).

Claim 1 of the present application reads:

> In a client computer system, a method of operation comprising:
>
> determining operating characteristic value(s), by the client system, for at least one operating characteristic of the client computer system; and
>
> adaptively requesting, by the client system, streaming of **model data comprising geometry data** from a remote content providing server, adjusting said requesting based at least in part on the determined operating characteristic value(s) of the at least one operating characteristic of the client computer system.

Thus claim 1 is clearly directed towards the adaptive requesting of **model data comprising geometry data** from a remote server, where the adaptive requesting of the **model data comprising geometry data** is performed by the client.

Li is cited for teaching adaptively requesting, by the client system, streaming of **model data comprising geometry data** from a remote content providing server. It is well settled that anticipation under 35 U.S.C. §102 requires the disclosure in a signal piece of prior art of **each and every** limitation of a claimed invention. *Electro Med. Sys. S.A. v. Cooper Life Sciences*, 34 F.3d 1048, 1052, 32 USPQ2d 1017, 1019 (Fed. Cir. 1994). Thus to anticipate the present invention, *Li* must disclose every element listed above.

The adaptive requesting of **model data comprising geometry data** allows different versions of the model data comprising geometry data to be requested by the client system. For example, a geometry data of modeled sphere of higher fidelity may comprise more points and vectors to enable a smoother rendering of the modeled sphere, whereas a modeled sphere of a lower fidelity would comprises less points and vectors, resulting in a more crude rendering of the modeled sphere.

In contrast, *Li* discloses a system where a content adaptation process can modify a multi-media document W having a number of content items, based on the features of a client, as specified by the client profile. Each content item may be transcoded into an infopyramid comprising **video, image, text, and audio data** of different modality and fidelity. See Figures 1 and 2, and their corresponding descriptions in column 4, lines 4-20 and 50-67.

As those skilled in the art would readily appreciate,

(a) video data of different fidelity comprises pictures of pixel data encoded/compressed at different fidelity levels, i.e. the pictures of pixel data having been reduced first by various compression processes such as predictions from prior frames, and then by coding processes, such as variable length encoding;

(b) image data of different fidelity comprises bit maps of different resolutions;

(c) textual data of different fidelity comprises character and symbol data with different font size attributes; and

(d) audio data of different fidelity comprises sound data rendered in one or more channels, i.e. mono, stereo, surround and so forth.

Accordingly, *Li* did not teach or suggest adaptation of model data comprising **geometric data**. Thus, *Li* does not disclose or suggest **each and every** limitation of claim 1.

Therefore claim 1 is patentable over *Li*.

Claims 2-10 and 35-36 depend from claim 1. Thus for at least the reasons discussed above with respect to claim 1, claims 2-10 and 35-36 are allowable over *Li*.

Claims 12, 23, 26 and 29 contain substantially the same limitations discussed above with respect to claim 1. Resultantly, Appellant respectfully submits that for at least the reasons discussed above with respect to claim 1, claims 12, 23, 26 and 29 are also allowable over *Li*.

Claims 13-21, 24-25, 27-28, 30-34 and 37-38 depend from claims 12, 23, 26 and 29. Thus, for at least the reasons discussed above with respect to claims 12, 23, 26 and 29, Appellant respectfully submits that claims 13-21, 24-25, 27-28, 30-34 and 37-38 are not anticipated by *Li*.

Issue II - Claim Group II

Rejection of claims 8, 9, 19, 20, 32 and 33 under 35 U.S.C. §102 was improper because such claims are patentable over Li et al., U.S. Patent 6,345,279 (hereinafter *Li*).

Claim 8 stand rejected under 35 USC §102(e) as being anticipated *Li*. As stated above, claim 8 is not anticipated by *Li*. However, for the additional reasons discussed below, Appellant respectfully submits that such claims are patentable over *Li*.

Claim 8, dependant from claim 6, reads:

> 6. The method of claim 1, wherein the method further comprises monitoring at least one performance indicator for the client computer system.
>
> 8. The method of claim 6, wherein said adaptively requesting of streaming of model data comprises switching to requesting the remote content providing server for higher precision versions of the model data, responsive to indicator value(s) of the monitored at least one performance indicator.

Thus, in the present claim, the adaptively requesting of streaming of model data is responsive to **performance indicator value(s)** for the client computer system. In contrast, the data used in *Li* to indicate the type of document to render on the client device is **profile data**. Profile data lists the capabilities and resource of the device (column 6, lines 3-4). In *Li*, ***static indicators*** of the client device are used to determine the document type to render on the client device. Thus, in *Li*, the adaptively requesting cannot be said to be **responsive to indicator values of the monitored *at least one performance indicator***. Resultantly, for at least the reasons discussed above, Appellant respectfully submits that claim 8 is not anticipated by *Li*.

Claims 9, 19, 20, 32 and 33 contain substantially the same limitations discussed above with respect to claim 8. Resultantly, Appellant respectfully submits that, at least the reasons discussed above with respect to claim 8, claims 9, 19, 20, 32 and 33 are also allowable over *Li*.

Issue III - Claim Group III

Rejection of claims 11 and 22 under 35 U.S.C. §103 was improper because such claims are patentable over *Li* in view of *Official Notice*.

Claims 11 and 22 where rejected under 35 U.S.C. 103(a) as being unpatentable over *Li*. Claims 11 and 22 depend from claims 1 and 12 respectively. Appellant respectfully submits that claims 11 and 22 are not obvious over *Li*.

As previously discussed, claims 1 and 12 are not anticipated by *Li*. Specifically, *Li* does not teach adaptive requesting by the client of the streaming of model data comprising geometry data from a remote server. The Examiner has taken Official Notice that the concepts and advantages of dropping audio data frames that arrive too late with respect to its sequence is old and well known in the data communications art. As stated in the initial response, Appellant respectfully disagrees that dropping audio data frames that arrive too late with respect to its sequence is old and well known in the data communications art. Appellant respectfully request that the Examiner either site a prior art reference that teaches dropping audio data frames that arrive too late with respect to its sequence or kindly remove the rejection.

Nevertheless, assuming, arguendo, that dropping audio data frames that arrive too late with respect to its sequence is old and well known in the data communications

art, *Li* does not teach adaptive requesting by the client of the streaming of model data comprising geometry data from a remote server. Appellant respectfully submits that, since the reference for the obviousness rejection does not anticipate the independent claims upon which claims 11 and 22 are based, claims 11 and 22 cannot be obvious over *Li*.

(9) Conclusion

Appellant respectfully submits that all the appealed claims in this application are patentable and requests that the Board of Patent Appeals and Interferences overrule the Examiner and direct allowance of the rejected claims.

This brief is submitted in triplicate, along with authorization to charge to Deposit Account No. 500393 for $330 to cover the appeal fee for one other than a small entity as specified in 37 C.F.R. §1.17(c) and a one month extension of time. We do not believe any additional fees are needed. However, please charge any shortages and credit any overages to Deposit Account No. 500393.

Respectfully submitted,
Schwabe, Williamson & Wyatt, P.C.

Dated: 7 June, 2004

Robert Watt
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APPENDIX A – CLAIMS AS PENDING

1. In a client computer system, a method of operation comprising:

determining operating characteristic value(s), by the client system, for at least one operating characteristic of the client computer system;

adaptively requesting, by the client system, streaming of model data, comprising geometry data, from a remote content providing server, adjusting said requesting based at least in part on the determined operating characteristic value(s) of the at least one operating characteristic of the client computer system.

2. The method of claim 1, wherein the at least one operating characteristic comprises one or more operating characteristics selected from a group consisting of communication bandwidth, processor power, availability of memory, availability of swap space, memory and bus speed, availability of video memory, availability of digital signal processing for audio decompression, and availability of graphics acceleration.

3. The method of claim 1, wherein said determining is performed as an integral part of an installation of a multi-media content player, and said adaptively requesting streaming of model data is performed by said multi-media content player.

4. The method of claim 1, wherein said model data comprise of data selected from a group consisting of lighting data, coloring data, texturing data, animation data, and audio data.

5. The method of claim 1, wherein said adaptively requesting of streaming of model data comprises adaptively requesting the remote content providing server for different versions of the model data based at least in part on the determined operating characteristic value(s) of the at least one operating characteristic of the client computer system.

6. The method of claim 1, wherein the method further comprises monitoring at least one performance indicator for the client computer system.

7. The method of claim 6, wherein said at least one performance indicator comprises one or more selected from a group consisting of bandwidth utilization, CPU utilization, memory utilization, memory swapping, cache hit rate, and audio frames drop rate.

8. The method of claim 6, wherein said adaptively requesting of streaming of model data comprises switching to requesting the remote content providing server for higher precision versions of the model data, responsive to indicator value(s) of the monitored at least one performance indicator.

9. The method of claim 6, wherein said adaptively requesting of streaming of model data comprises switching to requesting the remote content providing server for lower precision versions of the model data, responsive to indicator value(s) of the monitored at least one performance indicator.

10. The method of claim 1, wherein the method further comprises automatically synchronizing rendering of the received model data in accordance with the timeliness of the receipt of the model data.

11. The method of claim 10, wherein said automatic synchronization of rendering of the received model data comprises dropping audio data in proportion to the amount of the time the audio data arrived late.

12. A client computer system comprising:

a processor to execute programming instructions; and

a storage medium, coupled to the processor, having stored therein a first and a second plurality of programming instructions to be executed by the processor, the first plurality of programming instructions, when executed, determine operating characteristic value(s), by the client computer system, for at least one operating characteristic of the client computer system, and the second plurality of programming instructions, when executed, adaptively request, by the client computer system, streaming of model data, comprising geometry data, from a remote content providing server, adjusting said requesting based at least in part on

the determined operating characteristic value(s) of the at least one operating characteristic of the client computer system.

13. The client computer system of claim 12, wherein the at least one operating characteristic comprises one or more operating characteristics selected from a group consisting of communication bandwidth, processor power, availability of memory, availability of swap space, memory and bus speed, availability of video memory, availability of digital signal processing for audio decompression, and availability of graphics acceleration.

14. The client computer system of claim 12, wherein the first and second plurality of programming instructions implement a multi-media content player, and said first plurality of programming instructions are executed when the first and second plurality of programming instructions are installed on said client computer system, and when the second plurality of programming instructions are executed to download a multi-media title.

15. The client computer system of claim 12, wherein said model data comprise of data selected from a group consisting of lighting data, coloring data, texturing data, animation data, and audio data.

16. The client computer system of claim 12, wherein when executed, said second plurality of programming instructions adaptively request the remote content providing

server for different versions of the model data based at least in part on the determined operating characteristic value(s) of the at least one operating characteristic of the client computer system.

17. The client computer system of claim 12, wherein the second plurality of programming instructions further monitor at least one performance indicator for the client computer system.

18. The client computer system of claim 17, wherein said at least one performance indicator comprises one or more selected from a group consisting of bandwidth utilization, CPU utilization, memory utilization, memory swapping, cache hit rate, and audio frames drop rate.

19. The client computer system of claim 17, wherein when executed, said second plurality of programming instructions switch to requesting the remote content providing server for higher precision versions of the model data, responsive to indicator value(s) of the monitored at least one performance indicator.

20. The client computer system of claim 17, wherein when executed, said second plurality of programming instructions switch to requesting the remote content providing server for lower precision versions of the model data, responsive to indicator value(s) of the monitored at least one performance indicator.

21. The client computer system of claim 12, wherein when executed, said second plurality of programming instructions further automatically synchronize rendering of the received model data based at least in part on the timeliness of the receipt of the model data.

22. The client computer system of claim 21, wherein when executed, said second plurality of programming instructions automatically drop audio data in proportion to the amount of the time the audio data arrived late.

23. In a computer server, a method of operation comprising:

storing multiple versions of model data, comprising geometry data, tailored for different operating environments differentiated in accordance with value(s) of at least one operating characteristic of a remote requesting client computer system;

accepting requests from the remote requesting client system for said model data that adaptively includes version selection designations, with the inclusion being adjusted, by the remote requesting client computer system, based at least in part on the operating characteristics of the remote requesting client computer system; and

streaming the requested versions of the model data to the remote requesting client computer system, responsive to the accepted requests.

24. The method of claim 23, wherein the at least one operating characteristic comprises one or more operating characteristics selected from a group consisting of communication bandwidth, processor power, availability of memory, availability of

swap space, memory and bus speed, availability of video memory, availability of digital signal processing for audio decompression, and availability of graphics acceleration on the remote requesting client computer system.

25. The method of claim 23, wherein said model data comprise of data selected from a group consisting of lighting data, coloring data, texturing data, animation data, and audio data.

26. A computer server comprising:

a processor to execute programming instructions; and

a storage medium, coupled to the processor, having stored therein multiple versions of model data, comprising geometry data, tailored for different operating environments differentiated in accordance with value(s) of at least one operating characteristic of a remote requesting client computer system, and a plurality of programming instructions, when executed, accept requests from the remote requesting client computer system for said model data that adaptively includes, by the remote requesting client computer system, version selection designations, with the inclusion being adjusted based at least in part on said operating characteristic of the remote requesting client computer system, and stream the requested versions of the model data to the remote requesting client computer system, responsive to the accepted requests.

27. The computer server of claim 26, wherein the at least one operating characteristic comprises one or more operating characteristics selected from a group consisting of communication bandwidth, processor power, availability of memory, availability of swap space, memory and bus speed, availability of video memory, availability of digital signal processing for audio decompression, and availability of graphics acceleration on the remote requesting client computer system.

28. The computer server of claim 26, wherein said model data comprise of data selected from a group consisting of lighting data, coloring data, texturing data, animation data, and audio data.

29. A method for streaming multi-media content comprising:

storing by a multi-media content providing server, multiple versions of model data, comprising geometry data, tailored for different operating environments differentiated in accordance with value(s) of at least one operating characteristic of a remote requesting client computer system;

determining by a multi-media content player of the remote requesting client computer system, operating characteristic value(s) for at least one operating characteristic of the remote requesting client computer system;

adaptively requesting by the multi-media content player of the remote requesting client computer system, different versions of model data from the multi-media content providing server, adjusting said requesting based at least in part on

the determined operating characteristic value(s) of the at least one operating characteristic of the remote requesting client computer system; and

streaming by the multi-media content providing server, the requested versions of the model data, responsive to the requests of the multi-media content player.

30. The method of claim 29, wherein said determining is performed as an integral part of an installation of a multi-media content player, and re-performed by the multi-media content player at download time of a multi-media title.

31. The method of claim 29, wherein the method further comprises monitoring by the multi-media content player, at least one performance indicator for the remote requesting client computer system.

32. The method of claim 31, wherein said adaptively requesting by the multi-media content player comprises switching to requesting the multi-media content providing server for higher precision versions of the model data, responsive to indicator value(s) of the monitored at least one performance indicator.

33. The method of claim 31, wherein by the multi-media content player comprises switching to requesting the multi-media content providing server for lower precision versions of the model data, responsive to indicator value(s) of the monitored at least one performance indicator.

34. The method of claim 29, wherein the method further comprises automatically synchronizing by the multi-media player, rendering of the received model data based at least in part on the timeliness of the receipt of the model data.

35. The method of claim 1, wherein said determining of operating characteristic value(s) further comprises determining a single composite operating characteristic value based on the determined operating characteristic values of the at least one operating characteristic.

36. The method of claim 35, wherein said determining of said single composite operating characteristic value comprises computing a weighted index that weighs relative importance of said at least one operating characteristic.

37. The method of claim 12, wherein said determining of operating characteristic value(s) further comprises determining a single composite operating characteristic value based on the determined operating characteristic values of the at least one operating characteristic.

38. The method of claim 37, wherein said determining of said single composite operating characteristic value comprises computing a weighted index that weighs relative importance of said at least one operating characteristic.